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KICKAPOO ENVIRONMENTAL OFFICE

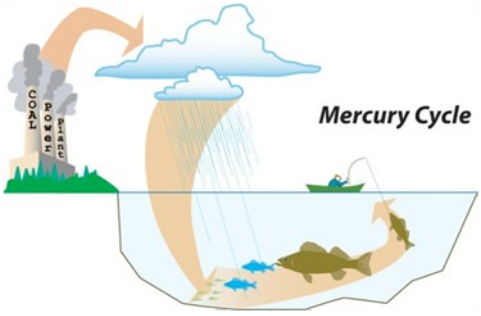
The Green Clan

How Can You Protect Our Water Quality By Using CFLs?

By Tej Attili, Water Quality Coordinator

Mercury is an element in the earth's crust that humans cannot create or destroy. It has traditionally been used to make products like thermometers, switches, and light bulbs. Coal fired power plants are a primary man-made source, as mercury that naturally exists in coal is released into the air when coal is burned to make electricity. Coal-fired power generation accounts for roughly 40% of the mercury emissions in the United States.

Using compact fluorescent lamps (CFLs) actually reduces mercury emissions from coal -fired power plants as CFLs are more energy efficient. A coal-fired power plant will emit 13.6 milligrams of mercury to produce the electricity required to use an incandescent light bulb, compared to only 3.3 milligrams for a CFL.



A major contributor of mercury to inland water bodies is atmospheric deposition, both wet and dry. Wet deposition transfers atmospheric constituents to the Earth's surface in precipitation. Dry deposition is atmosphere to surface deposition in dry weather. These pathways lead to mercury loadings in water bodies, where mercury may be converted to methyl mercury and bioaccumulate through the aquatic food chain. Mercury in the air eventually settles into water or onto land where it can be washed into water. Once deposited, certain microorganisms can change it into methyl mercury, a highly toxic form that builds up in fish, shellfish and animals and humans that eat fish.

Methyl mercury builds up more in some types of fish and shellfish than others. The levels of methyl mercury in fish and shellfish depend on what they eat, how long they live and how high they are in the food chain. Predators that eat fish-eating animals may be highly exposed. At high levels of exposure, methyl mercury's harmful effects on these animals include death, reduced reproduction, slower growth and development, and abnormal behavior.

Change a Light and Save Energy

By Scott Weir, Air Quality Coordinator

Your Environmental Office has purchased a supply of 14 Watt compact fluorescent lights (CFLs). These have a light output equivalent to a 60 Watt incandescent light bulb. The difference in Wattage provides significant energy savings. For every 1,000 hours of operation, these energy-efficient lights save 46 kiloWatts (46,000 Watts) when compared to a 60 Watt bulb.

During January, we will exchange one CFL for an old school incandescent light bulb. Simply drop by the Environmental Office with your incandescent bulb, and we will exchange it for a brand new CFL. You may exchange up to three old bulbs per household for new CFLs. The exchange will continue as long as our supply of CFLs lasts.

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You may have heard that CFLs contain mercury. This is true, but they contain much less than a regular fluorescent tube light. To help protect our environment and assure that the mercury is recycled, we have added an orange recycling bin at the Environmental Office. You may bring your burned out CFLs to the office and place them in the zip-lock bags provided. Put the bagged bulbs in the orange bin and we will make sure that they are recycled.

For more information, please contact Scott Weir by phone at 486-2601 extension 2, by e-mail at scott.weir@ktik-nsn.gov or just drop by the office.

An Introduction

By Kerry Wedel, Watershed Coordinator

I'd like to introduce myself as the new Watershed Coordinator with the Kickapoo Environmental Office (KEO). I began working for the KEO in December 2012. I grew up in rural Harvey County in south central Kansas and received my college education at Kansas State University in Manhattan. I've spent most of my professional career in Kansas working with water resource planning and management programs administered by the State of Kansas.

A watershed can be defined as an area of land that drains runoff from precipitation (e.g. rainfall, snowmelt) to a common point, such as a specific stream segment, lake or other water body. We all live and work within a watershed. I will be working on implementation of watershed-related program activities for the KEO with the primary goal of protecting the Tribe's water resources from harmful pollution and other environmental degradation. This will ultimately be accomplished through working together closely with the Kickapoo community.

I'm very excited to be working with the Kickapoo Tribe on watershed-related environmental projects and look forward to meeting many of you through these activities. I can be reached at 486-2601 extension 3.